

**REMARKS/ARGUMENTS**

These Remarks are responsive to the Office Action mailed July 1, 2005 (“Office Action”). Applicants respectfully request reconsideration of the rejections of claims 1-21 for at least the following reasons. Despite disagreement with the conclusions drawn in the Office Action mailed July 1, 2005, Applicants have amended the claims to expedite prosecution.

Claims 1-3, 6-11 and 13-16 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 6,403,964 to Stark *et al* (“Stark”). Claims 4-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stark in view of U.S. Patent No. 5,986,279 to Dewaele (“Dewaele”). Independent claim 1 has been modified to include the limitations of dependent claims 2-5. As recognized by the Office Action, Stark fails to disclose at least the limitations of claims 4 and 5. For these major deficiencies, the Office Action relies on Dewaele. The Office Action concludes that it would have been obvious to modify the method suggested by Stark to incorporate the Laplacian filter “to allow for a more versatile apparatus.”

Claim 12 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,403,964 to Stark *et al* (“Stark”) in view of U.S. Patent No. 5,272,343 to Sterns *et al* (“Sterns”). In addressing the deficiencies of Stark, the Office Action concludes that it would have been obvious to modify the method suggested by Stark to incorporate a positron emission tomography scanner “to allow for a more versatile apparatus.”

Claim 17 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Stark in view of Dewaele. In addressing the deficiencies of Stark, the Office Action concludes that it would have been obvious to modify the method suggested by Stark to incorporate the Laplacian filter “to allow for a more versatile apparatus.”

Claims 18-21 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over

Young et al in view of Stark. In addressing the deficiencies of Young et al, the Office Action concludes that it would have been obvious to modify the apparatus suggested by Young to utilize a histogram “to allow for a more versatile apparatus.”

The Office Action has failed to set forth a *prima facie* case of obviousness. Specifically, when a primary reference is missing elements, the law of obviousness requires that the Office set forth some motivation why one of ordinary skill in the art would have been motivated to modify the primary reference in the exact manner proposed. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 664 (Fed. Cir. 2000). In other words, there must be some recognition that the primary reference has a problem and that the proposed modification will solve that exact problem. All of this motivation must come from the teachings of the prior art to avoid impermissible hindsight looking back at the time of the invention.

For claims 1, 6-11 and 13-16, the Office Action’s justification for combining Stark and Dewaele has absolutely nothing to do with the deficiencies of Stark. Stark appears to be directed to producing a detector position map. Dewaele is directed to recording and reading a radiation image of an elongate body. As admitted by the Office Action, Stark fails to show at least “wherein the step of modifying the histogram to comprise a plurality of second peaks comprises applying a Laplacian filter to the smoothed histogram to produce a Laplacian histogram;” and “wherein the step of modifying the histogram to comprise a plurality of second peaks comprises modifying regions of the Laplacian histogram having values less than a threshold value to produce a thresholded histogram.” To properly modify Stark to correct for these major deficiencies, the Office Action has the burden to show some motivation why providing those elements would have overcome some perceived problem with Stark. Any such motivation is completely lacking. In fact, the Examiner’s statement of motivation “to allow for a more

versatile apparatus" is a clear example of hindsight and is not based on any teaching or motivation suggested by Dewaele that would lead one of ordinary skill in the art to modify the system of Stark. There is no suggestion in Dewaele to modify the system of Stark to include the admitted missing features to meet the combination of claim limitations recited by Applicants.

Accordingly, the Office Action has failed to provide any proper motivation for modifying Stark as taught by Dewaele, so the proposed modification fails. In fact, Stark and Dewaele are improperly combined and lack proper motivation. Even if Stark and Dewaele could be modified as suggested by the Office Action, the resulting combination would nevertheless fail to show each and every limitation claimed by Applicants.

In a similar manner, the Examiner fails to properly combine Stark and Sterns to address claim 12, Stark and Dewaele to address claim 17 and Young et al and Stark to address claims 18-21. In addition, for every combination of references proposed by the Examiner to address the various missing claim limitations, the Examiner relies upon the exact same statement of motivation, *i.e.*, "to allow for a more versatile apparatus." Clearly, the rejections lack any consideration for what is actually suggested or taught by any of the applied references.

The mere fact that Stark and any of the applied references can be somehow combined and modified does not render the resultant modification obvious unless there is a suggestion or motivation found somewhere in the prior art regarding the desirability of the combination or modification. *See* M.P.E.P. § 2143.01; *see also In re Mills*, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990); *In re Fritz*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). In addition, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

The remaining claims all depend ultimately from one of independent claims 1, 15 and 19. As such, each of these dependent claims contain each of the features recited in the independent claims. For the reasons stated above, Stark alone or in combination with any of the applied references fail to disclose the claimed inventions and the rejections should be withdrawn. Additionally, these claims are separately patentable over Stark alone or in combination with any of the applied references.

The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventors have done. The Examiner has clearly failed to reach the initial burden. Therefore, the pending claims are patentable over the prior art and are believed to be in condition for allowance.

### CONCLUSION

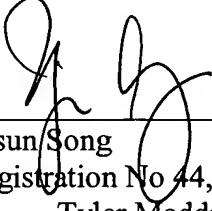
In view of the foregoing amendments and arguments, it is respectfully submitted that this application is in condition for allowance. If the Examiner believes that prosecution and allowance of the application will be expedited through an interview, whether personal or telephonic, the Examiner is invited to telephone the undersigned with any suggestions leading to the favorable disposition of the application.

It is believed that no additional fees are due for filing this Response. However, the Director is hereby authorized to treat any current or future reply, requiring a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. Applicants also authorize the Director to charge all required fees, fees under 37 C.F.R. §1.17, or all required extension of time fees, to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

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Dated: October 3, 2005

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